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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,699	04/26/2005	Taro Takahashi	155-05	8736

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EXAMINER	
GEORGE, PATRICIA ANN	

ART UNIT	PAPER NUMBER
1794	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/532,699	TAKAHASHI ET AL.	
	Examiner	Art Unit	
	Patricia A. George	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 June 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *5-20* is/are pending in the application.

4a) Of the above claim(s) *19 and 20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *5-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/01/2009 has been entered.

Election/Restrictions

Newly submitted claims 19 and 20 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the new claims are drawn toward a method of preparing cereal, whereas the invention originally claimed was toward the composition of an enhancer for cooked rice, noodles, or pasta.

The inventions are distinct, each from the other because of the following reasons: The previously claimed invention toward a product (enhancer), and the newly added claims are toward a method of preparing cereal which uses the product.

The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product. See MPEP § 806.05(h).

In the instant case the process for using the product as claimed can be practiced with another materially different product, such as an enhancer for cooked rice, noodles or pasta comprising sugar beet-derived water-soluble acidic polysaccharides.

Since the applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits.

Accordingly, claims 19-20 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 12 and all claims dependent on it are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "lustrous" in claim 12 is a relative term which renders the claim indefinite. The term "lustrous" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention because there is no point of relativity for determining a typical degree of luster, or what qualifies an object as “lustrous”.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 5-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lapre (5,972,399) in view of the combination of Takahashi, Sorensen, and Knight. Markovic is provided as evidence.

As to claims 5, 11, and 18, Lapre teaches a cooked and hydrated carbohydrate core, such as rice, is coated with a polysaccharide coating, comprising pectin, which provides the benefit of reducing the glycemic response to make improvements such as: treatment of diabetes, hypoglycemia, and glycogen storage disease, and suppressing appetite and assisting the performance of sustained physical activity. Lapre teaches the coating is crosslinked (i.e. enhanced) so that it will remain on the surface of the carbohydrate, because polysaccharides tend to be water soluble (i.e. aqueous). See abstract and summary sections.

Lapre teaches one or more water-soluble polysaccharides may be used, in combination, including: pectin and pectinic acid, which reads on water-soluble acidic polysaccharides. See bottom of column 7.

Lapre is silent as to the water-soluble acidic polysaccharides derived from a white potato that includes uronic acids as constituent sugars, as in claim 5.

Takahashi teaches many benefits from using pectin derived from white potatoes, such as: pectin derived from white potatoes in hot water (i.e. water soluble), is known to have a function which can stabilize proteinic distribution, see abstract and paragraph 0019; pectin derived from white potatoes has the benefit of maintaining its state even after heat is applied, see "Effect of the Invention"; the pectin derived from white potatoes is stronger because the starch that is contaminated during the extraction process, is desirably removed, see paragraph 0018; and the extraction temperature of pectin from white potatoes is carried out in a range that speeds up extraction and therefore provides an economical advantage because the extraction can be managed in a short time, see paragraph 0017.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the invention of a quality enhancer for cooked rice, as Lapre, to include pectin that is derived from any source known to be functional, including the white potatoes, as claimed, because Takahashi teaches many benefits in using the type of pectin derived from white potatoes, including that the pectin from white potatoes is stronger, and that it is more economical to make because the production time can be reduced due to having the capability of using increased temperatures. One of skill would be motivated to use a pectin that is stronger and is economically made, because its use would provide costs savings, such as reduced shipping cost for less volume (i.e. a stronger product), and reduced manufacturing cost, a certain benefit.

Lapre is silent as to the specifically claimed quantity of uronic acids in the water-soluble acidic polysaccharides, as in claims 5-7 and 13-14.

Markovic provides evidence that pectin consists of a linear chain of α-(1-4)-linked D-galacturonic acid (i.e. an uronic acid). See the 2nd paragraph of the introduction.

Therefore, the pectin in the modified invention of Lapre inherently has a quantity of uronic acid.

Lapre is silent as to the specifically claimed quantity of uronic acid in the water-soluble acidic polysaccharides, from the pectin derived from white potatoes, as in claims 5-7, and 13-14, however, a quantity of uronic acid inherently exists in the said pectin of the modified invention of Lapre.

Sorensen teaches that pectin derived from potatoes is known to have quantities of uronic acids, and that the quantity of the uronic acid is dependent on the type of plant that the potatoes are from. See page 7641, starting FTIR Spectroscopy and Figure 1c.

Further it is known that the amount of uronic acid in potatoes is a result that is effected by the variation of the dry weight of the potato tissue (i.e. is a result effective variable). See abstract of Knight *J. Exp. Bot..*1961; 12: 13-26.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the quantity of uronic acids of the white potato - derived water-soluble acidic polysaccharides, as the modified teaching of Lapre, to include the claimed quantities of uronic acids, because Sorenson (as evidenced Markovic) teaches the quantities of the level of pectin (uronic acid) in potatoes are known to exist and will vary based on the type of potato, and further Knight teaches it is known that the amount of uric acid in potatoes is a result that is effected by the variation of the dry weight of the potato tissue and therefore the skill to modify the amount of uronic acid in the pectin

derived from potatoes is also known to be adjustable and within the skill of one in the art. Further, it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. Furthermore, it is known in the art that the use of polysaccharides that contain uronic acid residues are beneficial for encapsulating solids when used in gluten compositions and therefore the art recognizes the use of low levels of uronic acid (e.g. such as those claimed), as being suitable for the intended use gluten products (e.g. rice, noodles, or pasta).

With respect for claims 8-10, and 15-17, the modified teaching of Lapre, teaches in Takahashi, that the potato-derived water-soluble acidic polysaccharides have a starch content of about 7%, which encompasses the claim of: a starch content of no more than 60%, as in claims 8 and 15; a starch content of no more than 30%, as in claims 9 and 16; and a starch content of no more than 10%, as in claims 10 and 17. See paragraph 0024.

As to claim 12, and the limitations that the quality enhancer is capable of imparting a lustrous surface appearance on the cooked rice, noodles, or pasta, loosening the cooked rice, noodles, or pasta, and is capable of inhibiting clouding of reconstituting water for noodles or pasta, are active method steps, however applicant's claim is toward the composition of a quality enhancer.

The claimed method limitations toward the capability of the finished product are not related to the product as claimed, and the future use of the claimed product appears

to provide no structural difference between the claimed product and that of Lapre (5,972,399) in view of the combination of Takahashi, Sorensen, and Knight.

As to the matter of capability, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the composition of an enhancer, as Lapre in view of the combination of Takahashi, Sorensen, and Knight, to include the claimed capabilities of the finished product, because similar compositions will have similar properties and therefore impart similar capabilities.

Furthermore, it is known in the art that the use of polysaccharides that contain uronic acid residues are beneficial for encapsulating solids when used in gluten compositions and therefore since the solid of the cooked rice, noodles, or pasta are encapsulated there would be less clouding of the reconstituting water, which would result in less starches in the water that are available to coat the rice, noodles, or pasta, and therefore a more lustrous surface appearance would occur because starches are known to provide a dull powdery coating.

Response to Arguments

It is asserted on pages 5-6 that impermissible hindsight is relied on to conclude the optimization of uronic acid, even though applicants admits, on page 6, that the genetic modification of potato plants is known to effect the potato pectin content. In response, as to the matter of having a specific quantity uronic acid in potatoes, Sorenson teaches that the level of pectin (uronic acid) in potatoes will vary based on the type of potato, and further it is long known that the amount of uronic acid in potatoes is

a result that is effected by the variation of the dry weight of the potato tissue (i.e. is a result effective variable). See abstract of Knight *J. Exp. Bot..*1961; 12: 13-26.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the quantity of uronic acids of the white potato - derived water-soluble acidic polysaccharides, as the modified teaching of Lapre, to include the claimed quantities of uronic acids, because Sorenson (as evidenced Markovic) teaches the quantities of the level of pectin (uronic acid) in potatoes are known to exist and will vary based on the type of potato, and further Knight teaches it is known that the amount of uronic acid in potatoes is a result that is effected by the variation of the dry weight of the potato tissue and therefore the skill to modify the amount of uronic acid in the pectin derived from potatoes is also known to be adjustable and within the skill of one in the art. Further, it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. Furthermore, it is known in the art that the use of polysaccharides that contain uronic acid residues are beneficial for encapsulating solids when used in gluten compositions and therefore the art recognizes use of low levels of uronic acid (e.g. such as those claimed), as being suitable for the intended use gluten products (e.g. rice, noodles, or pasta).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. 5,767,107 teaches it is known in the art that the use of polysaccharides that contain uronic acid residues are beneficial for encapsulating solids

when used in gluten compositions.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia A. George whose telephone number is (571) 272-5955. The examiner can normally be reached on Tue. - Fri. between 9:00 am and 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571) 272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Patricia A George
Examiner
Art Unit 1794

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